

APPRENTICES AND EMPLOYEES WORKING AS TRADESMEN SEPTEMBER 1977

NEW ISSUE

INQUIRIES

If you want to know more about these statistics ring Mr Graham Angus, on Canberra 526572 or our State Office, or write to Information Services, ABS, P.O. Box 10, Belconnen, A.C.T. 2616

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MAIN FEATURES

NOTE: The following figures relating to wage and salary earners were obtained from a survey of private payroll taxpayers and government bodies. They therefore do not cover all employees in Australia, nor do they include self-employed persons. (See paragraphs 3 and 16.)

- As at 30 September 1977, 405,900 employees covered by the survey were working as tradesmen; these employees represented approximately 10 per cent of all wage and salary earners covered.
- Of the employees working as tradesmen:
 - 347,100 (86 per cent) were qualified in their trade.
 - 77,800 (19 per cent) were over 50 years of age.
- 89,900 apprentices were covered by the survey. This represents an average of one apprentice to 3.9 qualified tradesmen.
- Vacancies for tradesmen numbered 5,200 at the survey date, which gives a job vacancy rate of 1.3 per cent (see paragraph 12).

EXPLANATORY NOTES

Introduction

This bulletin contains results of a sample survey of private and government employers conducted throughout Australia as at 30 September 1977 to obtain information about apprentices and employees working as tradesmen. The survey was carried out by the ABS at the request of the Committee of Inquiry into Education and Training, under the chairmanship of Professor B. R. Williams.

2. Owing to limitations in scope and coverage the survey results do not provide estimates of the total numbers of employees, apprentices or employees working as tradesmen. See paragraph 3.

Scope and coverage

3. The survey covered male and female apprentices and employees working as tradesmen in private employment and in Australian, State and local government employment. All such persons were represented except those:

- in the defence forces
- in agriculture
- in private households employing staff
- employed by private employers (other than hospitals) not subject to payroll tax.

All hospitals, whether subject to payroll tax or not, were included in the survey but other exempt non-government bodies, such as religious and benevolent institutions, were excluded. At the time of the selection of the sample, payroll tax was payable by employers in the States and Territories paying \$48,000 (Queensland \$62,400) or more a year in wages and salaries.

Definitions

4. *Apprentices* are those employees who were training for a skilled trade occupation and who were normally indentured to their employer and recognised by an appropriate apprenticeship authority. Also included were trainee apprentices (in New South Wales only) and "probationers".

5. *Tradesmen* are employees, other than apprentices, who were working in skilled trade occupations. The term includes females as well as males. Foremen, leading hands, etc., in charge of tradesmen and doing the work of tradesmen were included. Supervisors, etc. who were engaged mostly in managerial or administrative functions were excluded, even though they may have been qualified tradesmen. Persons assisting tradesmen, e.g. tradesmen's assistants, labourers, etc., were not included in the survey.

6. *Qualified tradesmen* are employees who had:

- (i) Completed an apprenticeship in a skilled trade in Australia, or

- (ii) obtained tradesman's status under the Tradesmen's Rights Regulation Act, or
- (iii) obtained a tradesman's qualification overseas which is generally accepted in Australia, or
- (iv) obtained a Certificate of Service in New South Wales under the provisions of the Apprenticeship Act, without completing a formal apprenticeship;

and who were working in their relevant trade occupation.

For the purpose of this survey membership of a trade union was not in itself evidence of tradesman qualifications.

7. *Unqualified tradesmen* are employees who, although not qualified, were doing work which would usually be done by qualified tradesmen, and were being paid as tradesmen.

8. *Total employees* refers to the estimated number of employees covered by the survey. Although the survey was not designed to provide such estimates they have been obtained and included in this bulletin in order to enable users to derive approximate ratios of numbers of tradesmen, etc. to total employees.

9. *Private employees* are employees of private employers subject to payroll tax and employees of non-government hospitals not subject to payroll tax.

10. *Government employees* are civilian employees of Australian and State government departments, authorities and semi-government bodies, and of local government authorities.

11. *Unfilled vacancies* for tradesmen refers to the number of vacancies available for filling on 30 September for which employers were actively trying to find or recruit employees from outside their organisation. Actively trying to find or recruit employees includes efforts to fill vacancies by advertising; by factory notices; by notifying government or private employment agencies or trade unions; and by contacting, interviewing or selecting applicants already registered with the employers. Excluded were vacancies not immediately available for filling on 30 September, and vacancies for work to be done under contract, e.g. by building sub-contractors. Also excluded were vacancies for apprentices.

12. *Job vacancy rate* is calculated by expressing the number of job vacancies as a percentage of the number of tradesmen plus vacancies for tradesmen.

13. *Size of firm, department, etc.* refers to the number of persons employed by the employer unit at 30 September 1977. Generally an employer unit comprised a complete enterprise, department or authority within a State or Territory, but in some cases it was necessary to obtain information from a smaller unit in order to

facilitate allocation of substantial numbers of employees to the various industries in which the selected employer was engaged.

Industry and skilled trade occupation classifications

14. The industry classification used for the survey is the Australian Standard Industrial Classification (ASIC), described in *Australian Standard Industrial Classification (Preliminary Edition) 1969, Vol. 1* (1201.0).

15. Occupations used in the survey were selected occupations from a list of skilled trade occupations obtained from Major Occupation Group 7/8 in *Classification and Classified List of Occupations, June 1971* (1206.0).

Interpretation of results

16. When comparing the results of this survey with other statistics of persons in trade and related occupations special care should be exercised because of a number of differences between this survey and other collections, particularly in scope and coverage (see paragraph 3) and in the coding of occupations. Significant features of this survey which are likely to affect such comparisons include the following –

- The proportions of tradesmen and total employees who are employed by private employers exempt from payroll tax, and thus excluded from the scope of the survey, differ between industries.
- Persons working in their own businesses (with or without employees) are excluded. The incidence of self-employment also varies between industries.
- In the tables in this bulletin apprentices are shown separately from tradesmen, whereas in general occupation coding they are included in the occupation group appropriate to their training.
- In the estimates of total employees, apprentices and employees working as tradesmen, both males and females are included.
- Employees with trade qualifications but not working as tradesmen are not classified as tradesmen.
- The five-yearly censuses of population and housing, and surveys conducted on the ABS household survey framework (e.g. the labour force surveys, and the supplementary surveys of personal incomes), utilise the *Classification and Classified List of Occupations, June 1971* (1206.0) in the coding of occupation descriptions. This classification, which adheres closely to the principles embodied in the International Labour Office classification system, groups occupation descriptions into categories which do not always distinguish between tradesmen and other persons doing related work. The occupation classification used for this survey, however, was based on definitions designed to differentiate persons employed as tradesmen from all other employees. *For this reason, statistics on these two different bases are not directly comparable.*

Sample design

17. Respondents included in the survey were selected from lists of employers stratified by State, sector, industry and number of employees. A sample of employers was randomly selected in each stratified cell. In order to reduce expected sampling error, sample numbers were allocated in proportion to very approximate preliminary estimates of the tradesmen population of each cell. That is, those cells where tradesmen were known to be more prevalent (e.g. construction and manufacturing industries) were more heavily sampled.

Reliability of the estimates

18. Since the estimates in this bulletin are based on information obtained from a sample of employers, they may differ from the figures that would have been produced if the information had been obtained from all employers. One measure of the likely difference is given by the *standard error*, which indicates the extent to which an estimate might have varied by chance because only a sample of employers was included in the survey. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all

employers had been included and about nineteen chances in twenty that the difference will be less than two standard errors.

19. Relative standard errors of estimates in this bulletin are 20 per cent or less except where indicated. Estimates with relative standard errors of 30 per cent and over are not shown.

20. In addition to sampling variability there are potential sources of error which can affect any type of statistical collection; probably the most important of these is misreporting by informants. In this survey for example, employers may have taken an over-generous view of the qualification status of persons employed as tradesmen. While every effort was made to eliminate errors of this kind some residual error may remain.

21. The Report of the Committee of Inquiry into Education and Training will be completed later this year.

All publications produced by the ABS are listed in *Catalogue of Publications, 1977* (1101.0) which is available free of charge from any ABS office.

R. J. CAMERON
Australian Statistician

TABLE 1. APPRENTICES, EMPLOYEES WORKING AS TRADESMEN AND TOTAL EMPLOYEES (a) : STATES,
30 SEPTEMBER 1977
(⁰⁰⁰)

State	Apprentices	Employees working as tradesmen (a)			Total employees
		Qualified	Unqualified	Total	
PRIVATE EMPLOYEES					
New South Wales	24.3	98.1	17.2	115.3	955.4
Victoria	18.7	74.5	16.4	90.9	877.9
Queensland	10.4	32.3	5.6	37.8	326.9
South Australia	7.5	30.9	5.5	36.4	240.1
Western Australia	7.1	23.0	†5.9	28.9	220.4
Tasmania	†2.6	6.7	†1.3	8.0	71.8
Australia (b)	72.4	273.3	53.5	326.9	2,739.3
GOVERNMENT EMPLOYEES					
New South Wales	6.3	26.4	1.9	28.4	407.5
Victoria	4.3	17.8	1.5	19.2	334.8
Queensland	2.4	10.0	*	10.4	195.2
South Australia	1.8	8.6	0.5	9.2	120.9
Western Australia	1.8	6.5	†0.3	6.8	101.7
Tasmania	0.6	2.4	*	2.8	48.4
Australia (b)	17.5	73.8	5.3	79.1	1,268.9
TOTAL					
New South Wales	30.6	124.5	19.2	143.7	1,362.9
Victoria	23.1	92.2	17.9	110.2	1,212.6
Queensland	12.8	42.2	6.0	48.2	522.2
South Australia	9.3	39.5	6.1	45.5	360.9
Western Australia	8.9	29.4	†6.2	35.7	322.1
Tasmania	3.2	9.1	†1.6	10.8	120.2
Australia (b)	89.9	347.1	58.8	405.9	4,008.2

(a) For definitions, and scope and coverage of the survey, see paragraphs 3 to 13. (b) Includes the Northern Territory and the Australian Capital Territory.

† Standard error greater than 20 per cent but less than 30 per cent. See paragraphs 18 and 19.

* Subject to sampling variability too high for most practical uses.

TABLE 2. APPRENTICES, EMPLOYEES WORKING AS TRADESMEN AND TOTAL EMPLOYEES (a) : INDUSTRY,
30 SEPTEMBER 1977
(⁰⁰⁰)

(1957)							
Employees working as tradesmen (a)							
Industry	Apprentices	Qualified	Unqualified	Total		Total employees	
				Under 50 years of age	50 years of age and over		
PRIVATE EMPLOYEES							
Manufacturing	35.1	142.1	29.2	135.5	35.8	171.3	1,054.3
Construction	12.2	41.5	6.2	41.8	6.0	47.8	135.2
Wholesale and retail trade	19.5	58.0	10.9	58.4	10.5	68.9	713.0
Other industries	5.7	31.7	†7.2	33.2	5.8	39.0	836.9
Total	72.4	273.3	53.5	268.8	58.0	326.9	2,739.3
GOVERNMENT EMPLOYEES							
Manufacturing	3.7	16.2	0.4	12.0	4.7	16.6	69.4
Construction	4.1	19.6	2.0	16.4	5.2	21.6	154.0
Other industries	9.8	38.0	2.9	31.0	9.9	40.9	1,045.5
Total	17.5	73.8	5.3	59.3	19.8	79.1	1,268.9
TOTAL							
Manufacturing	38.8	158.3	29.6	147.5	40.4	187.9	1,123.7
Construction	16.2	61.1	8.2	58.2	11.2	69.3	289.1
Wholesale and retail trade	19.5	58.2	10.9	58.6	10.5	69.1	719.5
Other industries	15.4	69.5	10.1	64.0	15.6	79.6	1,875.9
Total	89.9	347.1	58.8	328.2	77.8	405.9	4,008.2

(a) For definitions, and scope and coverage of the survey, see paragraphs 3 to 13.

† Standard error greater than 20 per cent but less than 30 per cent. See paragraphs 18 and 19.

TABLE 3. APPRENTICES AND EMPLOYEES WORKING AS TRADESMEN (a) : OCCUPATION,
30 SEPTEMBER 1977
(000)

Occupation	Apprentices	Employees working as tradesmen (a)		
		Qualified	Unqualified	Total
Building trades –				
Carpenters and joiners	7.3	33.6	4.3	37.9
Painters and decorators	1.0	7.3	1.0	8.3
Plumbers and gas fitters	3.4	11.2	†1.3	12.5
Bricklayers	*	2.8	..	3.0
Other building tradesmen	†1.1	†6.0	*	7.6
Total	13.4	60.9	8.4	69.3
Metal trades –				
Toolmakers and diemakers	0.5	9.4	0.3	9.7
Fitters and/or turners	15.0	61.5	5.4	67.0
Boilermakers	5.1	16.3	†0.7	17.0
Welders	1.0	11.1	4.4	15.5
Sheet metal workers	2.2	6.8	2.5	9.2
Metal machinists	0.9	5.9	3.5	9.4
Motor mechanics	12.0	32.0	4.5	36.5
Other metal tradesmen	4.4	17.4	4.6	22.1
Total	41.2	160.4	26.0	186.3
Electrical trades –				
Electrical mechanics and fitters, electricians	13.0	36.1	*	38.1
Radio, TV mechanics and repairmen	†0.9	†3.9	*	†4.4
Other electrical tradesmen	0.8	5.2	*	6.1
Total	14.7	45.2	3.4	48.5
Vehicle trades –				
Vehicle body builders	0.6	3.0	*	4.4
Vehicle body painters	†0.9	†3.6	*	†4.2
Panel beaters	†1.9	*	..	*
Other vehicle tradesmen	*	†2.8	*	*
Total	4.3	15.1	*	18.0
Printing trades –				
Hand and machine compositors	1.1	6.5	..	6.6
Printer, letter press	0.5	2.8	..	2.8
Printers, other	0.8	3.9	†1.1	5.0
Other printing tradesmen	0.9	5.4	†0.6	6.1
Total	3.3	18.6	1.9	20.5
Food trades –				
Butchers	*	†9.9	*	†11.1
Breadmakers and bakers	*	*	*	*
Cooks	†1.0	*	†6.2	*
Other food tradesmen	..	*	*	*
Total	†5.9	†24.1	9.1	33.3
Other trades –				
Cabinet makers	2.1	5.2	†1.0	6.1
Other wood and furniture tradesmen	†1.6	*	*	*
Clothing, footwear and textile tradesmen	0.4	4.2	2.7	6.9
Other	3.1	7.1	*	8.5
Total	7.1	22.9	7.1	30.0
Total	89.9	347.1	58.8	405.9

(a) For definitions, and scope and coverage of the survey, see paragraphs 3 to 13.

.. Less than 250.

† Standard error greater than 20 per cent but less than 30 per cent. See paragraphs 18 and 19.

* Subject to sampling variability too high for most practical uses.

TABLE 4. EMPLOYEES WORKING AS TRADESMEN (a) : INDUSTRY, STATES,
30 SEPTEMBER 1977
(⁰000)

State	Manufacturing	Construction	Wholesale and retail trade	Other industries	Total
New South Wales	62.8	23.7	26.6	30.6	143.7
Victoria	59.5	15.8	18.2	16.8	110.2
Queensland	21.9	10.6	†4.9	10.8	48.2
South Australia	23.3	6.8	*	5.5	45.5
Western Australia	14.4	5.7	†6.5	†9.1	35.7
Tasmania	4.2	2.5	*	2.8	10.8
Australia (b)	187.9	69.3	69.1	79.6	405.9

(a) For definitions, and scope and coverage of the survey, see paragraphs 3 to 13. (b) Includes the Northern Territory and the Australian Capital Territory.

† Standard error greater than 20 per cent but less than 30 per cent. See paragraphs 18 and 19.

* Subject to sampling variability too high for most practical uses.

TABLE 5. EMPLOYEES WORKING AS TRADESMEN (a) : TRADE GROUP AND INDUSTRY,
30 SEPTEMBER 1977
(⁰000)

Trade group	Manufacturing	Construction	Wholesale and retail trade	Other industries	Total
Building trades	13.7	43.4	*	9.3	69.3
Metal trades	107.4	14.9	32.3	31.7	186.3
Electrical trades	16.6	9.6	†6.8	15.6	48.5
Vehicle trades	5.3	..	†11.2	1.3	18.0
Printing trades	19.7	..	*	†0.5	20.5
Food trades	6.5	*	†10.6	*	33.3
Other trades	18.6	†0.8	*	†5.3	30.0
Total	187.9	69.3	69.1	79.6	405.9

(a) For definitions, and scope and coverage of the survey, see paragraphs 3 to 13.

.. Less than 250.

† Standard error greater than 20 per cent but less than 30 per cent. See paragraphs 18 and 19.

* Subject to sampling variability too high for most practical uses.

TABLE 6. APPRENTICES, EMPLOYEES WORKING AS TRADESMEN AND TOTAL EMPLOYEES (a) : SIZE OF FIRM,
DEPARTMENT, ETC. (b), 30 SEPTEMBER 1977
(⁰000)

Size of firm, department, etc. (Number of employees) (b)	Apprentices	Employees working as tradesmen (a)			Total employees
		Qualified	Unqualified	Total	
PRIVATE EMPLOYEES					
Under 20	18.1	69.5	16.6	86.1	530.1
20 and under 60	16.3	52.4	12.7	65.0	471.7
60 and under 140	9.3	32.5	8.0	40.5	340.6
140 and under 500	12.1	50.9	8.5	59.4	545.1
500 and over	16.6	68.0	7.8	75.8	851.8
Total	72.4	273.3	53.5	326.9	2,739.3
GOVERNMENT EMPLOYEES					
Under 20	*	*	..	*	*
20 and under 60	..	0.7	†0.4	1.1	32.1
60 and under 140	0.6	3.0	†0.7	3.6	66.6
140 and under 500	2.1	9.5	1.4	10.9	200.9
500 and over	14.6	60.2	2.7	63.0	951.2
Total	17.5	73.8	5.3	79.1	1,268.9
TOTAL					
Under 20	18.2	70.0	16.6	86.6	548.2
20 and under 60	16.4	53.0	13.1	66.1	503.8
60 and under 140	9.9	35.5	8.7	44.1	407.2
140 and under 500	14.2	60.4	9.9	70.4	746.0
500 and over	31.2	128.2	10.5	138.8	1,802.9
Total	89.9	347.1	58.8	405.9	4,008.2

(a) For definitions, and scope and coverage of the survey, see paragraphs 3 to 13. (b) Refers to the number of employees of an enterprise in a single State or Territory; see paragraph 13.

† Standard error greater than 20 per cent but less than 30 per cent. See paragraphs 18 and 19.

* Subject to sampling variability too high for most practical uses.

.. Less than 250.

TABLE 7. APPRENTICES AND EMPLOYEES WORKING AS TRADESMEN (a) : TRADE GROUP AND SIZE OF FIRM, DEPARTMENT, ETC. (b), 30 SEPTEMBER 1977 ('000)

Size of firm, department, etc. (Number of employees) (b)	Employees working as tradesmen (a)			
	Apprentices	Qualified	Unqualified	Total
BUILDING TRADES				
Under 20	3.4	13.4	†2.4	15.8
20 and under 60	2.9	10.8	*	12.6
60 and under 140	1.4	6.3	†1.4	7.7
140 and under 500	2.4	10.7	1.3	12.0
500 and over	3.4	19.6	1.6	21.2
Total	13.4	60.9	8.4	69.3
METAL TRADES				
Under 20	5.7	23.6	6.2	29.7
20 and under 60	8.0	23.0	5.5	28.5
60 and under 140	5.0	16.2	3.7	19.8
140 and under 500	6.8	31.0	5.1	36.1
500 and over	15.7	66.6	5.5	72.1
Total	41.2	160.4	26.0	186.3
ELECTRICAL TRADES				
Under 20	*	*	*	*
20 and under 60	†1.1	3.9	*	5.2
60 and under 140	†1.3	4.6	*	5.0
140 and under 500	2.6	9.0	†0.6	9.6
500 and over	7.3	23.3	0.6	23.9
Total	14.7	45.2	3.4	48.5
VEHICLE TRADES				
Under 20	*	*	*	*
20 and under 60	*	*	..	*
60 and under 140	*	†1.2	*	*
140 and under 500	0.6	*	0.3	†2.3
500 and over	0.5	3.5	0.3	3.8
Total	4.3	15.1	*	18.0
PRINTING TRADES				
Under 20	*	*	*	*
20 and under 60	†1.2	†4.5	*	†5.0
60 and under 140	†0.4	†2.7	†0.4	†3.1
140 and under 500	0.6	3.0	†0.3	3.4
500 and over	0.7	5.5	..	5.7
Total	3.3	18.6	1.9	20.5
FOOD TRADES				
Under 20	*	*	*	*
20 and under 60	*	*	*	†5.8
60 and under 140	*	*	*	†1.8
140 and under 500	*	†2.1	1.1	†3.2
500 and over	1.3	4.8	†1.2	6.1
Total	†5.9	†24.1	9.1	33.3
OTHER TRADESMEN				
Under 20	*	*	*	*
20 and under 60	†1.8	†5.2	†1.9	7.1
60 and under 140	†0.6	†3.5	*	4.7
140 and under 500	0.8	2.6	†1.2	3.7
500 and over	2.4	4.8	1.0	5.8
Total	7.1	22.9	7.1	30.0
TOTAL				
Under 20	18.2	70.0	16.6	86.6
20 and under 60	16.4	53.0	13.1	66.1
60 and under 140	9.9	35.5	8.7	44.1
140 and under 500	14.2	60.4	9.9	70.4
500 and over	31.2	128.2	10.5	138.8
Total	89.9	347.1	58.8	405.9

For footnotes see Table 6.

TABLE 8. EMPLOYEES WORKING AS TRADESMEN (a) : INDUSTRY AND SIZE OF FIRM,
DEPARTMENT, ETC. (b), 30 SEPTEMBER 1977
(⁰⁰⁰)

<i>Size of firm, department, etc. (Number of employees) (b)</i>	<i>Manufacturing</i>	<i>Construction</i>	<i>Wholesale and retail trade</i>	<i>Other industries</i>	<i>Total all industries</i>
PRIVATE EMPLOYEES					
Under 20	26.6	16.2	30.7	*	86.1
20 and under 60	31.3	14.5	14.2	*	65.1
60 and under 140	22.8	6.5	8.5	†2.7	40.5
140 and under 500	34.6	8.6	9.3	7.0	59.4
500 and over	56.0	1.9	6.2	11.7	75.8
<i>Total</i>	<i>171.3</i>	<i>47.8</i>	<i>68.9</i>	<i>39.0</i>	<i>326.8</i>
GOVERNMENT EMPLOYEES					
Under 20	*	*
20 and under 60	..	†0.5	..	*	*
60 and under 140	..	1.9	..	†1.4	3.6
140 and under 500	1.8	3.4	..	5.7	10.9
500 and over	14.5	15.7	..	32.7	63.0
<i>Total</i>	<i>16.6</i>	<i>21.6</i>	<i>†0.3</i>	<i>40.6</i>	<i>79.1</i>
TOTAL					
Under 20	26.6	16.2	30.7	*	86.6
20 and under 60	31.4	15.1	14.2	*	66.1
60 and under 140	23.0	8.4	8.7	4.1	44.1
140 and under 500	36.4	11.9	9.3	12.7	70.4
500 and over	70.4	17.7	6.2	44.4	138.8
<i>Total</i>	<i>187.9</i>	<i>69.3</i>	<i>69.1</i>	<i>79.6</i>	<i>405.9</i>

For footnotes see Table 6.

TABLE 9. JOB VACANCIES FOR TRADESMEN (a), 30 SEPTEMBER 1977
(⁰⁰⁰)

	<i>Vacancies for qualified tradesmen only</i>	<i>Total vacancies</i>
States —		
New South Wales	1.6	1.7
Victoria	1.5	1.7
Queensland	†0.3	†0.4
South Australia	†0.4	†0.5
Western Australia	†0.4	†0.4
Tasmania	*	†0.3
Industries —		
Manufacturing	2.7	3.2
Construction	†0.4	†0.5
Other	†1.5	†1.5
Trade groups —		
Building trades	†0.3	†0.3
Metal trades	2.7	3.0
Electrical trades	0.4	0.4
Printing trades	†0.3	†0.4
Other	*	*
<i>Total vacancies</i>	<i>4.6</i>	<i>5.2</i>
<i>Job vacancy rates (per cent)</i>	<i>1.3</i>	<i>1.3</i>

(a) For definitions, and scope and coverage of the survey, see paragraphs 3 to 13.

† Standard error greater than 20 per cent but less than 30 per cent. See paragraphs 18 and 19.

* Subject to sampling variability too high for most practical uses.